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Joint Scientific Workshop for:

FIRe!

Innovative strategies to improve the recycling of energy, nutrients and organic matter from waste materials

May 26th 2015

Background: This scientific event is jointly organised by the EU research and training projects: FertiPlus, INEMAD, ReUseWaste in collaboration with the Biorefine Cluster Europe. FertiPlus - *Reducing mineral fertilisers and agro-chemicals by recycling treated organic waste as compost and bio-char* - aims to identify urban and farm organic wastes that can be used to recycle nutrients into agriculture. INEMAD - '*Improved Nutrient and Energy Management through Anaerobic Digestion*' focuses on innovative strategies to reconnect livestock and crop production. ReUseWaste - *Recovery and Use of Nutrients, Energy and Organic Matter from Animal Waste* – aims to train a group of young researchers in developing new technologies for sustainable utilisation of resources in animal waste. The Biorefine Cluster Europe is an initiative bridging multiple projects in the domain of nutrient and energy cycling.

Aim of the workshop: To create a forum for knowledge exchange, research discussion and sharing of innovative ideas between partners of the three projects, as well as with important stakeholder and end-users of the technologies and innovations created in the project. For the young scientists in the three projects, the event should also serve as a training and dissemination event, a chance for them to expose their results to others and potential new employees, whether in the research community or private sector.

Practical details: The main event will take place at Zinzendorfhaus, outside the town of Erfurt in Germany. Arrival Mon 25th May 2015 (afternoon/evening). Sufficient accommodation is available on site for all at Zinzendorfhaus.

Getting to Zinzendorfhaus: The nearest airport is Frankfurt. There is a direct train from Frankfurt Airport to Erfurt. The name of the train station at Frankfurt airport is **Frankfurt(M) Flughafen Fernbf.** From Erfurt there it is a 10 minute regional train to the location (**Neudietendorf**). Journey time from Frankfurt is approximately 2.5 hours. Please consult the DB homepage to check train times and make train bookings. The travel planner may also suggest you change at the station called **Gotha**, where you can also change from the fast train to a regional train to Neudietendorf. (you do not necessarily have to go to Erfurt first).

Cost: The cost for the one-day meeting will be approximately 120 Euro. Participants will be invoiced individually by Zinzendorfhaus. This fee covers the conference rooms, meals and one night's accomodation.

Contact: For questions about the program and other practicalities, please contact Myles Oelofse. For questions about the venue, please contact Daniel Meyer-Kohlstock.

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	PROGRAM (updated May 18 2015)		
8.30-8.45	Welcome and presentation of background, program and objectives for the meeting (LSJ) Including welcome words by Head of department Prof. Eckhard Kraft, as representative of the local organiser (Bauhaus-Universität Weimar).		
8.45-9.15	Introduction to ReUseWaste (LSJ); FertiPlus (PK); INEMAD (Jeroen) => Aim of this is to provide attendants a brief introduction to each project and the issues/topics or challenges they address. 10 minutes per project.		
9.15-10.15	Keynote addresses (Chair: Myles Oelofse)		
9.15-9.35	Keynote address I: Lars Stoumann Jensen: How can we rethink animal manure management, processing and recycling for enhanced sustainability?		
9.35-9.55	Keynote address II: Kor Zwart: How can we innovate circular strategies to return urban organic waste to valuable and safe products for agriculture and horticulture?		
9.55-10.15	Keynote address III: Erik Meers: Biorefining mineral nutrients from agro- & food waste		
10.15-10.45	Coffee break		
10.45-12.30	Parallel Session I (see page 3 for parallel session I plan and details)		
	A. Treatment technologies and processing of wastes	B. Energy production from organic wastes	C. Nutrient recovery and closing cycles (circular economy)
	5 presentations (15m+Q)	*5 presentations (15m+Q)*	*5 presentations (15m+Q)*
12.30-13.30	**LUNCH**		
13.30-15.00	Parallel Session II (see page 4 for parallel session II plan and details)		
	D. Soil effects and fertilizer value of organic waste end products on soil quality	E. Environmental aspects e.g. GHG and ammonia emissions and emissions to water	F. Economics, policy and certification issues
	4 presentations (15m+Q)	*4 presentations (15m+Q)*	*4 presentations (15m+Q)*
15.00-15.30	**Coffee**		
15.30-17.30	Final session		
15.30-16.00	Keynote address IV: Eric Liegois (DG GROW): What is the challenge for EU policy makers to enable and support further steps to a circular and green agricultural economy and re-use of wastes (presentation via video-link/Skype).		
16:00-16:20	Keynote address V: Oene Oenema: How can we innovate and transform animal manure and agricultural wastes management, processing and recycling for enhanced sustainability?		
16.20-17.30	Closing plenary discussion[1]: Joint session to discuss interaction and future perspectives: Presentation of bullet points by rapporteurs from each parallel session (3-4 minutes each) followed by group discussions and plenary concluding discussion.		
	Conference Dinner		

[1] Each of the 6 parallel sessions has a chairman and two rapporteurs. The rapporteurs must prepare to present 4-5 main bullet points from their session for presentation and discussion at the closing plenary discussion

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10.45-12.30	**Parallel Session I**		
	A. TREATMENT TECHNOLOGIES AND PROCESSING OF WASTES	**B. ENERGY PRODUCTION FROM ORGANIC WASTES**	**C. NUTRIENT RECOVERY/ CLOSING CYCLES/ CIRCULAR ECONOMY**
Chairs Rapporteurs[1] *Presentation #*	***Chair:*** *David Fangueiro (ReUseWaste)* ***Rapporteurs:*** *Thanos Pantelopolous (ReUseWaste) & André Santos (ReUseWaste)*	***Chair:*** *JJ Leahy (ReUseWaste)* ***Rapporteurs:*** *Chibi Takaya (FertiPlus) & Maxwell Owusu-Twum (ReUseWaste)*	***Chair:*** *Kor Zwart (FertiPlus)* ***Rapporteurs:*** *Raghunath Subedi (ReUseWaste) & Maria Sanchez-Garcia (FertiPlus)*
1	Iria Regueiro; University of Lisbon ReUseWaste: **Acidification and separation of slurry: effects on slurry composition and gas emission**	Daya Pandey; University of Limerick; ReUseWaste: **Modelling of biomass gasification process particularly pretreated animal manures and solid wastes**	Daniel Meyer-Kohlstock; Bauhaus-Universität Weimar FertiPlus: **Local Organic Cycles in Urban Europe**
2	Georgios Bekiaris; University of Copenhagen; ReUseWaste: **Fast estimation of BMP value by FTIR-PAS**	Lydia Fryda; Energy Research Center,FertiPlus: **Evaluation of gasification co-produced biochars**	Pelin Kocaturk; Wageningen UR-Alterra & Copenhagen University; FertiPlus: **Nutrient recovery from digestate by using biochar and clinoptilolite**
3	MARIA SALUD CAMILLERI-RUMBAU; SDU; ReUseWaste: **Development of membrane technology for production of concentrated fertiliser and clean water**	Natalie Taupe;University of Limerick; ReUseWaste: **Gasification and pyrolysis of poultry litter – An opportunity to produce bioenergy and nutrient rich biochar**	Bruno Glaser; Martin Luther University Halle-Wittenberg (Other project): **Biochar as option for sustainable resource management**
4	Olga Popovic; University of Torino; ReUseWaste: **Activities and experience Slurry pre-treatments: results achieved in Marie Skłodowska-Curie funded fellowships at ReUseWaste project**	tbc; Ghent University; Biorefine_Cluster: **Biogas 2nd generation :biogas refinery as a more economic business model**	Edward Someus; REFERTIL: **Economical scale industrialized biochar processing**
5	SURJIT SINGH; UNIVERSITY OF LEEDS; FertiPlus, **A comparison of the physical and chemical properties of biochars and hydrochars**	Phuong Thuy Vu; WUR; ReUseWaste: **"Effect of source segregation and conventional separation of pig excreta on characteristics, nutrient content and biogas yield of solids – Impact on farming practise"**	Ulf Raesfeld, Weimar, Biorefine: **"Integrated nutrient recovery via co-fermentation of wood ash and pig slurry"**

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13.30-15.00	**Parallel Session II**		
	D. SOIL EFFECTS AND FERTILIZER VALUE OF ORGANIC WASTE END PRODUCTS (GREEN FERTILIZERS) ON SOIL QUALITY	**E. ENVIRONMENTAL ASPECTS E.G. GHG AND AMMONIA EMISSIONS AND EMISSIONS TO WATER (NITRATE)**	**F. ECONOMICS, POLICY AND CERTIFICATION ISSUES**
Chairs Rapporteurs [1] *Presentation #*	***Chair:*** *Peter Kuikman (Fertiplus)* ***Rapporteurs:*** *Daniel Meyer-Kohlstock (FertiPlus) & Iria Regueiro (ReUseWaste)*	***Chair:*** *Claudio Mondini (FertiPlus)* ***Rapporteurs:*** *Thomas Oldfield (FertiPlus) & George Bekiaris (ReUseWaste)*	***Chair:*** *Isabelle Vermander (INEMAD)* ***Rapporteurs:*** *Salud Camilleri-Rumbau (ReUseWaste) & Ulf Raesfeld (Biorefine)*
1	Raghunath Subedi; University of Turin, ReUseWaste: **Crop nutrient value and greenhouse gas emissions from biochar based biofertilizers**	Yong Hou; Wageningen University; ReUseWaste: **"Feed use and animal excretion in EU-27"**	Isabelle Vermander; DLV; INEMAD: **Organic fertilizer transport across borders : transparency in legislations**
2	Athanasios Pantelopoulos; UCPH; ReUseWaste: **Gross and Net nitrogen mineralization rates in soil amended with treated solid digestate**	MAXWELL OWUSU-TWUM; University of Trás-Os-Montes and Alto Douro (UTAD), ReUseWaste: **EFFECT OF SLURRY TREATMENTS ON GASEOUS EMISSIONS AND FORAGE YIELD AND QUALITY**	Sean Case; University of Copenhagen; ReUseWaste: **Farmer attitudes and potential barriers to the use of new organic fertilisers**
3.	André Santos; CEBAS-CSIC; ReUseWaste: **Fertilising capacity and NO3 leaching risk of composts produced from the solid fraction of pig slurry**	John Verhoeven; Wageningen UR; INEMAD: **Energierijk; Evaluation sustainability**	Juan Tur Cardona; University of Gent; INEMAD: **FARMERS' REASONS TO ACCEPT BIO-BASED FERTILIZERS: A CHOICE EXPERIMENT IN 8 DIFFERENT EUROPEAN COUNTRIES**
4	Ivona Sigurnjak, Ghent, INEMAD: **Fertilizer performance of liquid fraction of digestate as bio-based nitrogen fertilizer**	Gwen Willeghems; Ghent University; INEMAD: **the Impact of concentrated pig production: a spatial environmental analysis**	Jeroen Buysse; Ghent University; INEMAD: **Policy options to improve nutrient recycling**

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The rapporteurs must prepare to present 4-5 main bullet points from their session for presentation and discussion at the closing plenary discussion

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Participant list (as of May 6)

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(updated May 8 2015)